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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,713	11/02/2001	Selim S. Bencuya	CNXT-01CXT02861	4444
25700	7590	09/08/2004	EXAMINER	
FARJAMI & FARJAMI LLP 26522 LA ALAMEDA AVENUE, SUITE 360 MISSION VIEJO, CA 92691			MALDONADO, JULIO J	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/016,713

Applicant(s)

BENCUYA, SELIM S.

Examiner

Julio J. Maldonado

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-8 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Tokumitsu (U.S. 5,238,856).

In reference to claims 1, 4, and 11, Tokumitsu (Figs.1-13) in a related method to form microlenses on a semiconductor circuit teaches applying a first coat of micro-lens suitable material to the surface of the semiconductive circuit (101, 102, 103, 104); imparting a first lens formation pattern (105) onto the first coat of micro-lens suitable material; removing unwanted portions of the first coat of micro-lens suitable material; applying a second coat of micro-lens suitable material to the to the surface of the semiconductive circuit (101, 102, 103, 104); imparting a second lens formation pattern (107) onto the second coat of micro-lens suitable material; removing unwanted portions of the second coat of micro-lens suitable material; and forming a plurality of micro-lenses from the remaining portions of the first (106) and second (108) coats of micro-lens suitable material, wherein the micro-lens suitable material is a thermally deformable and further thermally hardenable material such as novolac type positive photoresists (column 3, line 38 – column 5, line 25).

In reference to claims 3 and 5, Tokumitsu teaches wherein the pluralities of lens formation patterns are alternate counterparts of each other (column 5, lines 3 – 13).

In reference to claim 6, Tokumitsu teaches wherein the first and second lens formation patterns comprise rectangular regions in a checkerboard pattern (column 5, lines 3 – 13).

In reference to claim 7, Tokumitsu teaches wherein the rectangular regions comprise broken corners to avoid continuity with neighboring regions (column 5, lines 14 – 25).

In reference to claim 8, Tokumitsu teaches wherein the step of forming the first and second plurality of micro-lenses comprise the steps of raising the temperature of the micro-lens suitable material in order to relieve the surface tension thereof; allowing the micro-lens suitable material to reflow in order to achieve a desired lens focal length; and reducing the temperature of the micro-lens suitable material in order to preserve the achieved lens focal length (column 4, lines 6 – 27).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokumitsu ('856) as applied to claims 1, 3-8 and 11 above, and further in view of Kono et al. (U.S. 5,604,077).

Tokumitsu teaches forming a photoresist layer comprising a novolac positive resist used as a micro-lens suitable material, but fail to expressly teach forming said photoresist by coating the photoresist onto the semiconductive circuit; and performing the patterning by placing a first formation mask comprising the first lens formation pattern proximate to the first coat of micro-lens suitable material, aligning the first formation mask relative to the semiconductive circuit and illuminating the first formation mask with radiation. However, Kono et al. in a related method to treat novolac positive photoresist teach forming said photoresist by coating the photoresist onto a substrate; and performing the patterning by placing a first formation mask comprising the first lens formation pattern proximate to the first coat of micro-lens suitable material, aligning the first formation mask relative to the semiconductive circuit and illuminating the first formation mask with radiation (column 5, line 60 – column 6, line 13). It would have been within the scope of one of ordinary skill in the art to combine the teachings of Tokumitsu and Kono et al. to enable the formation and patterning steps of Tokumitsu to be performed according to the teachings of Kono et al. because one of ordinary skill in the art at the time the invention was made would have been motivated to look to alternative suitable methods of performing the disclosed formation and patterning steps of Tokumitsu and art recognized suitability for an intended purpose has been recognized to be motivation to combine. MPEP 2144.07.

### ***Response to Arguments***

5. Applicant's arguments filed 06/21/2004 have been fully considered but they are not persuasive.

Applicants argue, "...Tokumitsu... teaches a method of manufacturing an image pick-up device having at least two photoelectric conversion elements that convert incident light to electric signals. Tokumitsu does not disclose, teach, or even suggest forming micro-lenses in accordance with the teachings of the novel multi-stage process of the present invention. Tokumitsu merely teaches forming first semicylindrical condenser lenses 106 and second semicylindrical condenser lenses 108 on alternate lines over light receiving portions 102. See Figure 7 and column 4, lines 8-31 of Tokumitsu...". In response to this argument, Tokumitsu does teach forming first and second semicylindrical lenses 106 and 108, respectively. However, Tokumitsu also teaches another embodiment of the invention (Figs.8-10 and column 5, lines 3 – 25), which successfully describes the claimed invention as mentioned in the above-Office Action.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

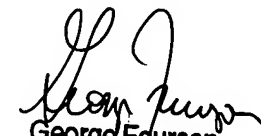
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Julio J. Maldonado whose telephone number is (571) 272-1864. The examiner can normally be reached on Monday through Friday.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri, can be reached on (571) 272-1855. The fax number for this group is 703-872-9306 for before final submissions, 703-872-9306 for after final submissions and the customer service number for group 2800 is (703) 306-3329.

Updates can be found at <http://www.uspto.gov/web/info/2800.htm>.

Julio J. Maldonado  
Patent Examiner  
Art Unit 2823

Julio J. Maldonado  
September 2, 2004

  
George Fourson  
Primary Examiner

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